DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-003316
Date Inspected: 28-Jul-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 2300
OSM Departure Time: 700
Location: Muroran, Japan

CWI Name:	Makhmud Ashadi			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Deviation and Jacking Saddles

Summary of Items Observed:

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes was present during the welding of the structural steel components for the West Deviation Saddles relative to this project. The following was observed:

Fabrication Shop # 4

At the start of the C-shift the QA inspector traveled to the Fabrication Shop # 4 to observe the continued Partial Joint Penetration (PJP) groove welding of the structural steel plate components for the West Deviation Saddle identified as W2E2. The Welding Procedure Specification (WPS) SJ-3011-2 and the Distortion Control Plan Document Number SJ-3109 Rev. 1 was utilized by the Japan Steel Works, Ltd. (JSW) personnel during the performance of the production welding of the rib plate to base plate connections. The WPS was also used as a reference by the QC inspector during the verification of the welding parameters. The welding was performed in the Horizontal Position (2G) with the work in the vertical plane and with the axis of the weld horizontal. The Shielded Metal Arc Welding (SMAW) process was utilized and the welding was performed by JSW personnel Sotoru-Watanabe ID 08-5159 and Yuichi-Arai ID 5157. The PJP welding appeared to be performed as per Step 1, Attachment 6 of the JSW Distortion Control Plan Revision 1.

The consumable utilized by the welding personnel appeared to be a Hobart Brothers Product and the trade name was identified as Hoballoy9018-M which appeared to comply with the AWS Specification A5.5 and the AWS Classification E9018-M H4R. The size of the electrode appeared to be 4.8 mm in diameter.

The Quality Control (QC) inspection was performed by Intertek Testing Services personnel Makhmud Ashadi. The QC inspector verified the preheat temperatures of 180 and shortly thereafter the QA inspector observed the

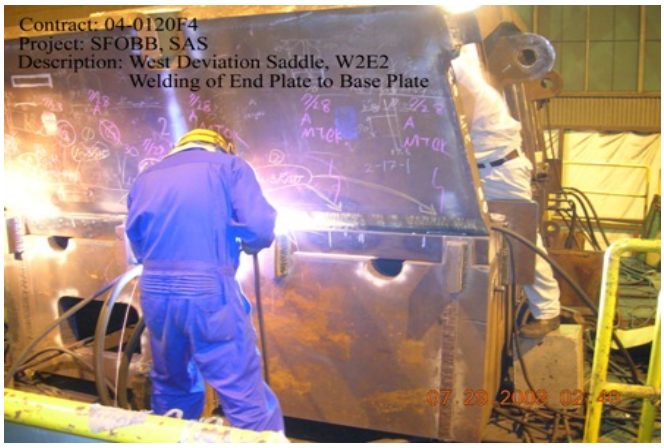
QC inspector, Mr. Ashadi verify the Alternating Current (AC) welding parameters which were observed as follows, 250 amps and 24 volts with a travel speed measured at 140 mm/m. The welding parameters were verified utilizing a Hioki 3109 Clamp Meter, Model RMS and the surfaces temperatures were verified utilizing an Anritsu HA 100E digital surface thermometer during the QC verification. The calibration dates of the measuring instruments utilized by the QC inspector were previously verified by the QA inspector.

The Magnetic Particle Testing appeared to have been performed on the previous A and B-Shifts prior to the arrival of the QA inspector. For additional information see Summary of Conversations below.

The welding, inspection and the verification tasks were performed on the weld joints identified as E2Y-4L-1 stamped side, E2Y-4L-2 unstamped side, E2Y-17L-1 stamped and unstamped side. In regards to the definitions of the stamped and unstamped side are as follows; stamped side denotes the side with the heat number steel stamped on the base material and unstamped side denotes the side without the heat number steel stamped on the base material.

The QA inspector's observations were performed at random intervals during the shift. The QA inspector noted that it appeared the approved and latest revised WPS's were posted at the welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding parameters, preheat and interpass temperatures were verified by the QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators for the surface temperatures. The filler metal utilized by the JSW welding personnel was also verified. The QA inspector also observed the JSW welding personnel removing the rust from the surface of the PJP groove weld prior to welding the weld joints. The QC inspector ITS personnel, Mukhmud Ashadi appeared to perform the visual weld examinations, monitoring of the welding and the verification of the welding parameters in accordance with the contract documents.

The following digital photograph illustrates the observations of the activities performed on this date.



Summary of Conversations:

Upon the QA inspector's arrival at the designated welding station the QC inspector, Makhmud Ashadi informed the QA inspector that the root pass Magnetic Particle Testing (MPT) was performed on the previous scheduled A and B-Shifts and was found to be acceptable by Nikko Inspection Services (NIS) personnel Rikuo Kumagai. The

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

QA inspector noted that the above mentioned PJP groove welds was noted on the base material, adjacent to the weld joint MT-OK with this report date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer